# ABSTRACT

An A/D converter suitable for use in a system in which the signal power of noise increases with the signal power of the signal, such as an imaging system, utilizes a variable quantization system for converting analog signals into digital signals. The variable quantization is controlled so that at low signal levels the quantization is similar or identical to conventional A/D converters, while the quantization level is increased at higher signal levels. Thus, higher resolution is provided at low signal levels while lower resolution is produced at high signal levels.